



Dinosaurs Here Yesterday Gone Today

Curriculum Unit 85.07.04
by Carolyn Kinder

Introduction

The history of life goes back over a billion years. There are many developments that have taken place. Let's go back in time. We are going on a voyage to the Mesozoic Era. Before we depart, we must prepare ourselves for the trip. It is very important to understand that in this period or time, there are no contributions made by man. It is about 200 million years before man appeared on the scene. So we are only there to observe the period of which the dinosaurs ruled the earth. There is no way that we can alter prehistoric life. It is our objective to understand it and how we might benefit from learning about it. In this unit, the major concern will be on the form and function of the dinosaurs. The dinosaurs were the most successful group of land animals ever to inhabit this planet. For over 150 million years these creatures ruled the world and suddenly became extinct.

The content of this unit can be taught in the middle school, grades 5-8. The science, social studies, art and music teachers can use a team teaching approach. The suggested teaching time for this unit is two to three weeks. It will include a pre-post test, vocabulary, lesson plans, teacher and student reading lists, a list of field trips, speakers and a bibliography.

Teachers will be especially interested in teaching a unit on dinosaurs because they have always been fascinating prehistoric animals. Dinosaurs were the largest land vertebrates.

Some of the best of the dinosaurs from various quarries have been mounted at Peabody Museum at Yale University here in New Haven. At Peabody there are several mounted skeletons of different kinds of dinosaurs. There is a wall mural depicting the age of the dinosaurs by R. Zallinger, noted artist who graduated from the Yale School of Art. Students will be very impressed to see the display of dinosaurs at Peabody and will get the opportunity to study the form and function of the dinosaur. They will be able to compare the difference in the structure of several of the large dinosaurs such as Brachiosaurus, Trachodon, Tyrannosaurus Rex and Stegosaurus.

During the Upper Triassic of the Connecticut Valley, dinosaurs roamed our land in large numbers. The track of land between Hartford and Cromwell contains thousands of dinosaur footprints. Dinosaur Park in Rocky Hill, Connecticut has one of the world's largest tracking systems. Students can do castings or dinosaur footprints.

In our study of the dinosaur, it is necessary to look at the era and period or which it existed. This will give us a

better understanding of life in the days of the dinosaurs.

Well, sit back and listen carefully as we explore a part of geologic times. It is important to know that all the dinosaurs did not live at the same time. The dinosaurs reigned over this earth for some 150 million years during the *Mesozoic Era*, the Age of Reptiles. This era is subdivided into three periods. The *Triassic Period* (230 to 180 million years ago), the *Jurassic Period* (180 to 135 million years ago) and the *Cretaceous Period* (135 to 63 million years ago). Dinosaurs are first known from the middle Triassic Period, some forms attaining gigantic sizes. Following the conclusion of the Cretaceous Period, roughly 70 million years before present, dinosaurs became extinct. See figure accompanying lesson plan II.

As we explore the dinosaurs, a major concern is whether or not its body was equipped enough to deal with its environment. The unit will focus on the controversial issues of the dinosaurs as reptiles or warmblooded—such as mammals and why the dinosaurs became extinct.

It is hoped that this paper will be informative and enjoyable to teach. It is designed to help students better understand why it is important for us to have diversity among *species* and that we must co-exist in the world together as living *organisms*. Each must find its niche and adapt to the changing *ecosystem*, if it is to survive.

Background

The history of the dinosaurs has been reconstructed through the study of fossils. Fossils may be the remains, impressions, or molds of ancient plants and animals. *Fossils* have given a lot of information concerning past animal and plant life. The study of fossils is called *Paleontology*, which is the science of living things. *Bones* may be preserved with relatively little change except that the organic material that once filled cavities and microscopic spaces in the bone decays and disappears, leaving only the hard, mineral substance of the bone. Usually the empty spaces become filled with other mineral. Bone is a *hydroxyapatite*.

Our knowledge of the dinosaurs is based on their bones. It is possible to tell their size, and to know something of their appearance and habits. The study of bones can show relationships of various kinds of dinosaurs. Fossils in older rocks help us to understand where dinosaurs come from, who their ancestors were and how different kinds developed.

Another type of fossils are footprints. Fossil footprints and trails are present in certain deposits. If an animal walked or crawled over soft mud or sand and this was covered over by another layer of *sediment* before the trail was wiped out, the track may still be preserved after the whole deposit has hardened into rock.

The skeleton of a dinosaur was built for strength and support. The skeleton will tell us all about this vertebrate. The proper support is critical in the structure of an organism. The backbone of the vertebrates is their main body support.

Some *dinosaurs* were reptiles, and all reptiles are *vertebrates* or backboned animals. Reptiles are cold-blooded animals. Reptiles developed skin with scales, plates, and later with bony armor. This helped protect them against sun, dryness, disease and enemies.

Traditionally, dinosaurs have been regarded as reptiles. Today, *Paleontologists* are re-evaluating the dinosaurs. There is considerable evidence that indicate that dinosaurs may have been endothermic creatures, with some physiological characteristics seen in birds and mammals, rather than the cold-blooded reptile. The outcome of the dinosaur as a cold-blooded reptile as opposed to a warm-blooded mammal will not be known for many years.

Today reptiles eggs have a hard or horny porous covering. Inside the egg is a yolk with a stored supply of food and a membrane to protect the young reptile and enable it to breath while still within the shell. These eggs can be laid on land, this allowed reptiles to wander far and wide. The food in a reptile egg enable the young to grow more before they hatch. Most young reptiles can take care of themselves right after they leave the egg.

The typical reptile today is cold-blooded such as, the alligators, crocodiles, and lizards and has a protective covering of scales or plates, five clawed toes on each foot, and lungs instead of gills. Most species are *carnivores* and most lay eggs. But no one trait separates the reptiles from all other animals, as feathers do for birds.

The *Cotylosaurs*, a primitive reptile, might be considered grandfathers of all the reptiles. The descendents, the Thecodonts that lived about 200 million years ago, were the dinosaurs' direct ancestors. ¹ The crani show they had a more advanced kind of skull than *Cotylosaurs*. This allowed them to be more intelligent than their ancestors. Several of them were in effect bipedal. If you compare the picture of a hipbone of man with that of a four-legged animal, you can see that both have the same bones, but they are formed differently, see figure 1. The hipbones of reptiles are different from ours, but these bones show that some Thecodonts walked on their hind legs. The size or the front and hind leg bones will still show this. The front legs in two-legged animals are shorter than those of animals who walk on four legs.

By the time the Thecodonts had developed, other groups of dinosaurs had branched off, see figure. One of these groups have rise to the mammals. Another developed into present day turtles. ² The *Thecodonts* were also ancestors of the Crocodiles, birds, and Pterosaurs, the flying reptile. Through a long process of *evolution*, meaning that one group of animals moving to another over a long period of time, we finally reach the dinosaurs.

From the order Thecodontia evolved the two great orders of dinosaurs, Saurischia and Ornithischia.

Saurischia is the order of lizard-hipped dinosaurs. In the *Saurischia* pelvis, the pubis extends down from the ilium behind the pubis, see figure 3.

Ornithischia , the order of bird-hipped dinosaurs, is typified by a pelvis in which the ilium is considerably elongated while the pubis is usually parallel with the ilium, see figure 3.

The teeth in the *Saurischia* skull appear along the front and side margins of the jaw, or only in the front. Teeth are usually absent from the front of the *Ornithischia* mouth. Some genera of this order display premaxillary teeth. In many *Ornithischian* forms there is a horny, birdlike beak, and all have a prementary bone at the front of the lower jaw. The *Saurischia* skull is equipped with openings in front of the orbits. Usually such *fenestrae* are absent in the *Ornithischian* skull. Behind the orbits of the *Saurischian* skull are two large openings that provide attachment areas for the jaw muscles of the animal. In the *Ornithischian's* large muscular skull, the teeth have usually been considerably reduced or eliminated. All the carnivorous forms are *Saurischians*, and virtually all the armored forms are *Ornithischians*.

We have landed in the Triassic Period, which is the lower part of the Mesozoic Era. The location is North America. The dominant form of life in the Mesozoic Era are vertebrates, animals with backbones. Let's look at some of the dinosaurs of this era. The *Brachiosaurus* is the most massive, though not the longest, known terrestrial animal of all time. *Brachiosaurus* , largest specimen unearthed, weighed 66 metric tons, has skeleton 23.5 meters long with a height of 11.75 meters. Unlike most Sauropods, *Brachiosaurus* has front limbs longer than the hind limbs, so that the body slopes down to the back, terminating in a relatively short

tail. The nostrils are located atop a raised mound above the eyes. Brachiosaurus, one of the largest dinosaurs, is known from North America, Europe and Africa.

As we continue on our voyage through the Mesozoic Era, let's take a look at more of the various dinosaurs.

Stegosaurus was discovered in Jefferson County, Colorado in 1877. Two series of alternating, erect, leaf-shaped bony plates surmount the neck, back and tail. Once thought to serve as armor, these plates are known to contain blood vessels and were probably used in heat regulation. The animal's real protection came from the four spikes at the end of the tail. This dinosaur is best known for its supposed "three brains," two of which were actual enlargements of the spinal cord in the shoulder and pelvic regions. ³ These nerve centers much larger than the actual brain, controlled the movements of the head and tail. This arrangement was not uncommon among dinosaurs and is even found in mammals. *Stegosaurus* grew to a length of about 25 feet (7.4 meters) and weighed approximately four tons (3.5 metric tons). Some paleontologists have proposed that the animal might have been able to rear up on its hind legs or that the plates lay flat against the body. *Stegosaurus* is known from Wyoming, Oklahoma, Montana, Utah and Gloucestershire, England. ⁴

Iguanodon remains has been found in 1825 in Europe, Asia, Africa and North America. *Iguanodon* was originally named for some fossil teeth, roughly resembling those of the modern-day iguana lizard, found in Kent, England. Early restorations showed the dinosaur as a giant, horned and quadrupedal iguana somewhat resembling a rhinoceros. ⁵ With the discovery of the complete skeletons, *Iguanodon* is now known to be a biped and the horn is identified as a spiked thumb. *Iguanodon* was strong, and bulky, probably weighing about 6.2 metric tons and reaching a length of about 8.9 meters and a height of 4.7 meters.

Tyrannosaurus Rex is one of the most highly evolved of all known dinosaurs, This "tyrant lizard" was one of the most powerful *carnivores* ever to walk this planet. ⁶ It was one of the largest Theropods, this dinosaur stands 5.3 meters tall and is approximately 11.75 meters long. The head is gigantic, with daggerlike teeth measuring 7.8 to 15.5 centimeters in length. The forelimbs are small, almost useless appendages, each equipped with two claws. These tiny forelimbs were utilized in helping the animal rise off the ground to stand up after its repose and that such animals walked with their bodies horizontal to the ground, their head and tail counterbalancing one another. *Tyrannosaurus* was discovered in the Hell Creek beds of Dawson County, Montana, and is also known from Wyoming, Texas, possibly North and South Dakota and Saskatchewan, Canada. It has been reported from poor indeterminate material, from Shandong, China.

Triceratops is the largest of the Ceratopsians. The largest known individual may have measured 9 meters in length and weighed approximately 10.5 metric tons. The skull alone measures over 2 meters long, with a short, solid frill and three horns. One short horn surmounts the snout while two long horns appear above the orbits. The top of the frill was probably armed with a series of bony nodes. *Triceratops* is a fierce looking animal, well fortified in defending itself. Skulls often show puncture wounds. *Triceratops* was one of the last dinosaurs to become extinct. The dinosaur was discovered in Converse County, Wyoming. It is also known in the Dakotas, Montana, Saskatchewan and Alberta, Canada. This animal is one of the most commonly known of dinosaurs.

There are several speculations as to why the dinosaurs became extinct. Among the factors that contributed to their downfall may have been a drop in temperature at the end of the Cretaceous Period, and/or the appearance on the earth of egg-eating mammals.

Another reason for the disappearance of the dinosaurs may have been that they were so long and

overdeveloped that it was hard for them to get enough food, because of specialized animal predators.

The May 6, 1985 issue of "Time Magazine" offered alternatives or is shedding more light on why the dinosaurs became extinct. This new theory is talking about mass extinction. This theory suggests that every 28 million years the shifting orbit of the earth intersects a disk of comets that lies in the outer reaches of the Solar System. As a Planet designated X passes through the disk, it dislodges comets, sending them toward Earth. Somehow this disrupts the Solar System. This dust or particles cause damage to various plant and animal life, sometimes causing mass extinction to several species of both plants and animals. ⁷

As scientists continue to do research, the final results are not in, but through the information that has been found from using clues from bones, teeth, footprints and rocks they have somewhat untangled the dinosaurs' history.

Perhaps understanding the evolution process of organisms such as the reptiles and mammals will help us to better understand the ecosystem in which we live. Also it will help us probe into the question to find answers to our own mere existence.

Pre-Post Test

Circle the letter of the correct answer in the space provided.

1. Evidence of plant or animal life found in rocks is called
a. a fossil b.an adaptation c.a species
2. Species of plants and animals no longer living are said to be
a. extinct b.fossils c.adaptations
3. A change in an organism that helps it survive in a particular environment is called
a. an adaptation b.inorganic change c.anatomy
4. Dinosaurs are considered to be
a. reptiles b.mammals c.both
5. The study of structure of living things is called
a. zoology b.taxonomy c.anatomy
6. Many fossils are found in layers of
a. oxygen b.radioactive decay c.sedimentary rock
7. Many scientists believe that dinosaurs were the largest land vertebrates to inhabit the
a. earth b.space c.water
8. The theory that organisms gradually change over time is called
a. evolution b.diversity c.taxonomy
9. A group of organisms that are closely related is called
a. notations b.ancestors c.species
10. The study of similarities in structure among living things is
a. embryology b.comparative anatomy c.biochemistry
11. Scientists compare similarities in structure among living things to learn about the organisms

- a. natural selection
- b. comparative anatomy
- c. embryology

12. The study of how organisms develop is called
 - a. embryology
 - b. mutation
 - c. natural selection
13. The study of the chemical makeup of living things is called
 - a. radioactive decay
 - b. comparative anatomy
 - c. biochemistry
14. The small bones that make up the backbone are called
 - a. cartilage
 - b. vertebrae
 - c. tendons
15. Scientists who look for and study fossils are
 - a. paleontologists
 - b. geologists
 - c. archaeologists
16. A scientist would be most likely to find fossils in
 - a. lava
 - b. sandstone
 - c. marble
17. A dinosaur footprint preserved in stone is called a
 - a. fossil cast
 - b. fossil imprint
 - c. petrified fossil
18. An animal that existed in the past but is no longer living on the earth is said to be
 - a. decayed
 - b. petrified
 - c. extinct
19. Paleontology is the study of
 - a. volcanoes
 - b. water
 - c. fossils
20. All vertebrates are
 - a. backboned
 - b. warm-blooded
 - c. cold-blooded

Answers to Pre-Post Test

1. a, 2. b, 3. c, 4. a, 5. c, 6. c, 7. a, 8. a, 9. c, 10. a, 11. b, 12. a, 13. c, 14. c, 15. a, 16. b, 17. b, 18. c, 19. c, 20. a.

Vocabulary

1. Bone—is a hard, dense, porous structure composed of calcium, phosphate salts and organic materials forming the skeleton of vertebrate animals.
2. Brachiosaurus—is a sauropod, the most massive, though not the longest known terrestrial animal of all time, and one of the largest dinosaurs. This dinosaur is known from North America, Europe and Africa.
3. Carnivorous—is an adjective meaning to eat or live on flesh.
4. Cotylosaurs—is a primitive reptile and a distant ancestor of the dinosaurs, also considered grandfathers of all the reptiles.
5. Cretaceous—is the third and last of the geologic periods of the Mesozoic Era, preceded by the Jurassic and followed by the Tertiary period of the Cenozoic Era. (Three periods BP 70-120.)
6. Dinosaurs—a group of reptiles (orders Saurischia and Orithischia) existing on all the continents, but extinct by the end of the Mesozoic Period. They varied in size from small, two-footed, pigeonlike carnivores to gigantic, four-footed, aquatic and terrestrial forms, many of them heavily armored, of both herbivorous and carnivorous habits.
7. Ecosystem—is a community of organisms in their environment.
8. Endothermic—is pertaining to, attended by, or produced from the absorption of heat.
9. Evolution—the series of changes by which a given type of organism has acquired the physiological and structural characteristics differentiating it from other types.
10. Fenestrae—windowlike apertures in the body.
11. Fossils—the actual remains of plants or animals, preserved in the rocks of the earth's crust.
12. Herbivorous—is an adjective meaning to feed on vegetable matter (plants).
13. Hydroxyapatite—a complex phosphate of calcium $\text{Ca}_5(\text{PO}_4)_3\text{OH}$ that occurs as a mineral and is the chief structural element of vertebrate bone.
14. Iguanodon—is a ornithopod dinosaur known to be a biped with horn identified as a spiked thumb.
15. Jurassic—pertaining to the middle period of the Mesozoic Era succeeding the Triassic and followed by the Cretaceous.
16. Lime—white mineral substance, calcium oxide (CaO), obtained from limestone (CaCO_3).
17. Mesozoic—is the era between the Paleozoic and the Cenozoic, including the Triassic, Jurassic and Cretaceous Periods.
18. Mineral—an inorganic substance found naturally in the earth, groups of minerals form rocks.
19. Organism—an animal or plant characterized by cells, tissues, organs and organ systems to maintain vital activities.
20. Ornithischia—an adjective applied to a dinosaur characterized by bone structure such as Sauropod.

21. Paleontology—a science dealing with the life of past geological periods as known from fossil remains.
22. Paleontologist—is a person who studies fossils.
23. Reptile—is a cold-blooded, egg-laying, air-breathing vertebrate, especially one with scales, as a lizard, snake, or crocodile.
24. Saurischia—adjective applied to the order of reptilelike dinosaurs that flourished through most of the Mesozoic Era.
25. Sediment—material deposited by water, wind, or glaciers.
26. Silica— SiO_2 , hard often glassy material found in various forms, as in mineral that forms the grains of sand.
27. Species—a class of individuals having common attributes and designated by a common name.
28. Stegosaurus—is a Ornithischian dinosaur which is heavily armored.
29. Thecodonts—is a group of reptiles from which the dinosaurs are direct descendants.
30. Trachodon—is a Ornithischia dinosaur based on a single mandibular tooth discovered in the Judith River.
31. Triassic—the lowest of the three geological periods in the Mesozoic Era.
32. Tryannosaurus Rex—is one of the largest and one of the most highly evolved of all known Theropods. Also this tyrant was one of the most powerful carnivores ever to walk this planet.
33. Vertebrate—animals with backbones.

Notes

1. Herbert S. Zim, *Dinosaurs*, William Morrow and Company, U.S.A., 1954, p. 22.
2. Ibid., p. 25.
3. Donald F. Glut, *The New Dinosaur Dictionary*, Citadel Press, Secaucus, N.J., 1982, p. 230.
4. Ibid., p. 230.
5. Ibid., p. 152.
6. Ibid. r p. 256.
7. *Time Magazine*, "Did Comets Kill The Dinosaurs?", Time Inc., Los Angeles, CA, May, 1985, Vol. 125, No. 18, pp. 72-83.

Student Reading List

Aliki, *Digging up Dinosaurs*, Harper L Row, 1981.

Elting/Goldman, *Dinosaur Mysteries*, Grosset & Dunlap, 1980 (HB).

Watson, *Dinosaurs and Other Prehistoric Reptiles*, Western Publisher, 1980 (HB).

Zallinger, *Dinosaurs*, (394), Random House, 1977.

Teacher Reading List

Colbert, *The Year of the Dinosaur*, Charles Scribner and Sons, 1977 (HB).

Colbert, *Dinosaurs An Illustrated History*, Hammond, Inc., 1983 (HB).

McGinnis, *Carnegie's Dinosaurs*, Carnegie Museum, 1982.

Compare the differences of the hipbone of a two-legged animal with that of a four-legged animal.

(figure available in print form)

FIGURE 1 Match up Similar Bones

See Lesson Plan II for the two orders of dinosaurs. (Dinosaur Family Tree)

(figure available in print form)

FIGURE 2

(figure available in print form)

FIGURE 3 (Top) Pelvis of a typical Saurischian dinosaur Allosaurus. (Bottom) Pelvis of the Ornithischian Steposurus.

Lesson Plan I

Dinosaurs

Student Activity Name the above prehistoric animals using the description given below:

Triceratops—large head with three horns

Brontosaurus—Largest of dinosaurs; had long neck and small head

Tyrannosaurus—a large meat-eater with any sharp teeth

Trachodon—a plant-eating dinosaur with a duck-like bill

(figure available in print form)

Lesson Plan III

Skeleton of Tyrannosaurus Rex, a carnivorous dinosaur of the Age of Reptiles. PHOTO: American Museum of Natural History.

Student Activity Write a story about this dinosaur. Tell what era and period he belonged to. What is his order? How did he walk and why? What were his dietary habits?

(figure available in print form)

Lesson Plan IV.

Identify the following dinosaur parts with the correct dinosaur on the attached chart.

(figure available in print form)

TAILS

(figure available in print form)

TEETH

(figure available in print form)

Forms and Head Structures

(figure available in print form)

DINOSAURS

(figure available in print form)

Field Trips

Connecticut

Yale University, Peabody Museum, Whitney Avenue, New Haven. This museum has an interesting display of different dinosaurs from the three periods of the Mesozoic Era. Students will also see the bone structures of the dinosaurs and a natural depicting the age of the dinosaurs by R. Zallinger. Display located on the first floor of the museum. Small group on guided tours are accepted. Contact the museum for group schedules and rates.

Rocky Hill, Dinosaur Park. Twenty minutes from New Haven and ten minutes out of Hartford. This park is off Exit 23 on I-91, going toward Hartford. Signs are available once you exit off ramp. There is a museum which houses a display of the (tracking) system used to uncover dinosaur tracks. Dinosaur footprints can be made by students who are visiting. Contact museum for hours, size of group and cost.

Out-of-State

Smithsonian Institute, Washington, D.C., National Museum of Natural History, this museum houses a comprehensive dinosaur collection. If you are visiting Washington, it is an interesting place to see.

Dinosaur National Monument, Jensen, Utah has a large display of dinosaurs, also Dinosaur Nature Association, Box 127, Jensen, Utah 84035 has books, maps, charts, slides, posters, calendars and much more. Please write.

Speakers

The list of speakers will include teachers from the New Haven School System who have participated in the Biomineralization Seminar. Please check curriculum units by Fellows of the Yale-New Haven Teachers Institute 1985, Volume VII.

Resource List

Charts

The Age of Reptiles (color, 12" x 70 1/2"), Zallinger, Yale University Press, 1975.

Brachiosaurus (B&W, 11 1/2" x 17 1/2"), Henderson, 1979.

Dinosaurs, Kalmenoff, Dover Publications, Inc., 1984.

Geologic Time Illustrated, Pope University of New Mexico, 1981.

Map

Colbert, Edwin H., "Location of Dinosaurs Fossils From Dinosaurs, An Illustrated History," Stereographic World, Hammond, Inc., Maplewood, N.J., printed U.S.A.

Music

American Teaching Aids, Inc., "Our Dinosaur Friends," Covina, CA, ATA 3228.

Postcards

Brown, Margaret, "Diplodocus," Smithsonian Institution, Washington, D.C., 1982.

Brown, Margaret, "Triceratops," Smithsonian Institution, Washington, D.C., 1982.

Slides

Smithsonian Institution Photographic Services, National Museum of Natural History, Jurassic Dinosaurs, Allosaurus, Camptosaurus, Diplodocus, 1984 Smithsonian Institution.

Smithsonian Institution Photographic Services, National Museum of Natural History, Diplodocus, Sauropod Dinosaur (Plant-eater) lived about 135 million years ago, 1984 Smithsonian Institution.

Smithsonian Institution Photographic Services, National Museum of Natural History, Armored Dinosaur, Stegosaurus, plant-eater of the later Jurassic Period, 135 million years ago, 1984 Smithsonian Institution.

Smithsonian Institution Photographic Services, National Museum of Natural History, Triceratops, horned dinosaur of about 70 million years ago, one of many plant-eating dinosaurs, 1984 Smithsonian Institution.

Bibliography

Colbert, E.H. , *The Age of Reptiles*, W .W. Norton & Company, New York, 1966.

DeCamp, L.S. h DeCamp, C.C., *The Day of the Dinosaur* , Doubleday & Company, Garden City, New Jersey, 1968.

Glut, D.F., *The New Dinosaur Dictionary*, Citadel Press, Secaucus, New York, 1982.

Halstead, L.B., *Vertebrate Hard Tissues*, Wakeman Press, 1967.

Romer, A., *Vertebrate Body*, 3rd Ed., Saunders, 1961.

Time Magazine, "Did Comets Kill the Dinosaurs," May, 1985, pp. 72-83.

Tweedie, M., *The World of Dinosaurs*, William Morrow and Company, New York, 1977.

Zim, H., *Dinosaurs*, William Morrow and Company, U.S.A., 1954.

<https://teachersinstitute.yale.edu>

©2019 by the Yale-New Haven Teachers Institute, Yale University

For terms of use visit <https://teachersinstitute.yale.edu/terms>